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Implementing GPRA: Examining the Prospects for Performance Budgeting in the Federal Government

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IMPLEMENTING GPRA:
EXAMINING THE PROSPECTS FOR PERFORMANCE BUDGETING IN THE FEDERAL GOVERNMENT[1]

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Abstract

The Government Performance and Results Act of 1993 (GPRA) is the latest in a series of attempts to introduce performance budgeting at the federal level in the United States; attempts that largely failed due to administrative complexities, lack of investment in managerial, accounting, and information systems, and the absence of institutional incentives to promote gains in economic efficiency. If the GPRA were to succeed in significantly altering the focus of federal budgeting from inputs to outputs and, more importantly, outcomes, it is likely to have a positive influence for years to come. While we find the objective of GPRA laudable, we do not believe that the GPRA, in its current form, will succeed in transforming the focus of federal budgeting from annual line-item appropriations to multi-year outputs and outcomes. The GPRA fails to address the incentive structure of the current budget process; does not provide an independent mechanism by which performance plans and reports can be audited for accuracy; and does not provide a formal framework by which departments and Congress can contract on cost, output, and performance terms.

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1. Introduction

The objective of this paper is to review the apparent resurrection of performance budgeting in the United States and to evaluate the prospects of success for the Government Performance and Results Act of 1993 (GPRA).[2] Preceded by the Financial Management Initiative (Great Britian, 1982), Programme Management and Budgeting (Australia, 1983), Public Finance Act (New Zealand, 1989) and the Chief Financial Officers Act (United States, 1990), the GPRA is the latest in a series of international budget reforms with the objective of shifting the focus of policymakers and budget practitioners from expending resources to providing outputs and services to customers (Mascarenhas, 1996).[3] Each of these initiatives shares the common goals of improving decision-making processes between the various branches of government, restructuring management processes to enhance administrative and economic efficiency, and increasing accountability to taxpayers. Curiously, even though its potential impact on the federal budgeting process is significant, the GPRA has received scant attention in the economics literature.[4]

We believe that our review and assessment of the GPRA is timely and pertinent given that the federal government is only now entering the second year of full GPRA implementation. If the GPRA significantly alters the focus of federal budgeting from annual line-item appropriations and obligations to near and long-term operational and strategic objectives, it is likely to have a positive

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[2] See Public Law 103-62 approved on August 3, 1993 for the full text of the Government Performance and Results Act.

[3] In this paper we use the terms Aperformance based budgeting@ and Aperformance budgeting@ interchangeably. We define performance budgeting in the widest context as any initiative or reform that attempts to quantify public sector outputs or outcomes and to explicitly incorporate the outputs and outcomes in the budgeting process.

[4] Jones and McCaffery (1992, 1993, 1997) and Meyers (1999) are among those who have examined the structure of the GPRA. See Jordan and Hackbart (1999) and Willoughby and Melkers (1998, 2000) for reviews of performance based budgeting at the state level.

influence on federal budgeting for years to come. On the other hand, if the GPRA creates incentives for federal agencies to understate their capabilities or overstate their resource requirements, then it is likely the GPRA will become another in the long list of discontinued federal budgeting reforms. We believe that three key challenges must be surmounted for the GPRA to be considered a success. First, the GPRA must create an institutional framework conducive to forming consensus on a unique set of objectives among the various stakeholders. Second, the GPRA must achieve its ultimate stated objective of linking resources to results - or to relate data on program performance to appropriation account structures - for the conjectured efficiency gains to be realized. Finally, the GPRA must overcome a traditional system of budgeting that, while often criticized and the focus of almost continuous reform efforts, has survived to this day (Wildavsky, 1992).

In this paper we review the GPRA and whether it can be successful given its current structure and the experience of other budgeting reforms in the United States and elsewhere in the world. In Section 2, we review the differences between control and performance budgets, noting how performance budgeting reforms are designed to address the incentive structure of control budgets. In Section 3, we briefly examine the four significant federal performance oriented budgeting initiatives since World War II and discuss what lessons have been learned from these and more recent international performance oriented budget reforms. We briefly review the GPRA in Section 4 and follow with a discussion of incentives and the budget process in Section 5. In Section 6, we discuss the problem of achieving consensus among the many stakeholders and the development of performance metrics. The last section summarizes and conjectures on the future of the GPRA.

2. Are there significant differences between control and performance budgets?

Typically, public budgets serve three different functions: a planning function, a management function, and a control function (Shick, 1966).[5] These functions roughly correspond to the four stages of the budget cycle: executive preparation and legislative review (planning), execution (management), and audit (control).[6] While traditional, control focused budgets are oriented toward the allocation of resources among different expenditure categories, performance budgets instead focus on the outcomes generated by the final production of public goods and services. Performance budgets generally emphasize two key elements: a) outputs and the inputs required by government agencies to produce the outputs in question; and b) outcomes which are implicitly assumed to represent consumer preferences for public goods and services. If, as currently envisioned in the GPRA, budget requests are to be ultimately tied to outcomes, then the role of federal budgeting and accounting systems will need to shift from principally a control function to more of a planning and management function.[7]

The planning function of public budgeting typically emphasizes the allocation of resources among competing public programs and roughly coincides with the concept of allocative efficiency. Traditionally, due the political nature of the planning function, it has resided at the highest levels of government. While the planning function of public budgeting focuses on the inter-program allocation of public resources, the management function instead focuses on the intra-program

[5] Wildavsky (1974) noted that public budgets can be thought of as a series of objectives with price tags attached to each objective.

[6] See McCaffery (1999) for a discussion of the four stages of the federal budget process.

[7] Eventually, the annual performance plan of each agency is to be integrated with the agency's budget request so as to illustrate the resources requested to meet the performance objectives (GPRA, 1993 and OMB, 1998).

allocation of resources. The management function may influence allocative efficiency through the reallocation of intra-program resources and technical efficiency through improved management and production techniques. Finally, the control function of public budgeting focuses on the legal, administrative, and other restrictions on the expenditure of public resources and is often thought of as the mechanism by which government is accountable to the taxpayer.

Control budget systems are principally designed to allocate and track expenditures on inputs to ensure fiscal accountability and to minimize the misappropriation of public resources.[8] Control systems typically rely on statutory requirements, administrative procedures, and institutional structures to minimize diversion or misuse of public funds. Departments may argue for greater flexibility and less oversight in the use of public resources in order to respond to what they view as the evolving preferences and needs of their customers. Congress, on the other hand, may feel the need to exercise the power of the purse and increase its restrictions on the use of appropriations and oversight of departmental operations to ensure the appropriate use of public resources and accountability to taxpayers (Pitsvada, 1983, 1998).

Ironically, while a control budget's primary function is to insure accountability to taxpayers, this function may be subverted by the focus on expending current resources and maintaining the current level of appropriations. The incentive structure of a control system is negative in orientation, that is, non-use or misuse of public resources results in the imposition of institutional (lowered appropriations in succeeding fiscal years) and personal penalties (demotion, reassignment, or, in the worst cases, incarceration). While the inputs in a control system are readily quantifiable and thus can be managed with standard accounting and management techniques, the transaction costs of

[8] See Premchand (1983) and Gianakis (1996) for a discussion.

administering a control system may increase over time due to the proliferation of administrative, statutory, and institutional requirements. Moreover, there is no guarantee that control budgeting and accounting systems encourage cost-minimizing behavior.

An example of the perverse incentives created by control budgeting is the "use it or lose it" phenomenon (Niskanen, 1971, 1972, 1975, 1994). Congress typically appropriates monies to agencies on an annual basis to fund operations throughout the fiscal year and may be hesitant to provide supplemental appropriations except in cases of significant national interest (natural disasters, acts of war, or other emergencies). Congress also places restrictions on the reprogramming of appropriations (inputs) between line items.[9] Moreover, funds not spent or obligated by the end of the fiscal year typically cannot be transferred to the next fiscal year, that is, either the funds are expended or they are lost. Public sector managers rationally respond to these incentives by ensuring their appropriations are exhausted by the end of the current fiscal year and by engaging in defense actions to preserve their current budgetary allocation. Cost savings are not a product of the incentive structure and are often viewed as a threat to the prospects of maintaining or increasing the organization's appropriations in the future.

The incentive structure of the control budget is such that public managers are penalized for identifying and implementing cost saving techniques. Departments that expend their appropriated resources in the current fiscal year may be rewarded with an equal or greater appropriation in the following fiscal year. On the other hand, departments that realize cost savings through process

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[9] Reprogramming is the transfer of funds within an appropriation to purposes other than those intended at the time the appropriation was requested and approved by Congress. In some instances, agencies are allowed to reprogram resources from one program activity to another as long as the amount of resources does not exceed the threshold specified by the relevant Congressional committee. See Shick (1966), Premchand (1983), among others.

improvements or managerial reforms may have their budgets reduced in the following fiscal year and the resources transferred to organizations that met or exceeded their funding levels. Departments with shrinking client bases (agriculture and veterans administration, for example) may respond by expanding their portfolios to retain or increase current levels of funding, leading to complex institutional structures where several agencies offer rival public services. In effect, the institutional structure of control budgeting appears to reward agencies that are over budget while penalizing departments for implementing reforms that improve technical efficiency. Addressing this moral hazard is one of the primary arguments for the implementation of a performance based budgeting system (Melese, 1997).

Performance based budgeting initiatives attempt to address what is perceived as the flawed incentive structure of control or input oriented budgeting systems by shifting the focus from resource allocation to outcome (or output) generation.[10] By shifting emphasis from inputs to outcomes, the planning and management functions of the budget are supposed to gain importance relative to the control function in a performance budget. However, the case for performance budgeting rests on three implicit assumptions: (a) **goal congruence** -- that departments can develop relevant and useful strategic plans; (b) **measurement** -- that goals can be quantified so that success in achieving the goals or outcomes can be checked in performance reports; and (c**) incentives** -- that control budgeting systems can be redesigned to tie budgets to outcomes and sufficient motivation exists for organizations to effectively allocate resources and administer programs. In linking resources to

[10] Activity Based Costing (ABC) may be thought of as an effort to address this problem. Under ABC, input or control budget data (costs) associated with specific activities are aggregated to serve a management function. Ideally, this effort will offer public managers the opportunity to identify the true costs of providing specific outputs. See Brown, Myring, and Gard (1999), Mullins and Zorn (1999), and Williams and Melhuish (1999).

results, the last step of performance budgeting attempts to refocus attention from the control to the management and planning functions.

3. What lessons can be drawn from the performance budgeting experience in the United States and other countries?

As the one of the last major government-wide budgeting reforms of the 20th century, we believe that it is useful to adopt two different perspectives while discussing the Government Performance and Results Act of 1993 (GPRA). Viewed historically, the GPRA is the latest iteration in a series of government-wide performance budgeting initiatives. Viewed contemporaneously, GPRA is the leading initiative among a host of current federal management and financial reforms. In this section, we first review the most significant performance budgeting initiatives in the United States since World War II. We then examine some of the more recent international budgeting reforms and conclude with the lessons these initiatives hold for the United States.

3.1 Why have the previous attempts at performance budgeting failed in the United States?

While the GPRA is perhaps the most significant federal budgeting initiative in the past ten years, it is by no means the only attempt by the federal government to explicitly incorporate outcomes into the budgeting process. Four major federal government-wide performance budgeting initiatives have been attempted since World War II. These include: 1) the Budget and Accounting Procedures Act; 2) the Planning-Programming-Budgeting System; 3) Management by Objectives; and 4) Zero-Base Budgeting. The failure of these reforms to meet their stated objectives illustrates, as we discuss below, the difficulty in transforming the focus of the federal budgeting process from inputs to outcomes.

BAPA (Budget and Accounting Procedures Act): In 1949, the Hoover Commission presented the framework for the first federal performance budget with the explicit objective of shifting the federal government's budgeting focus from allocating resources to managing outcomes. Congress adopted the framework purposed by the Hoover Commission in 1950 with the Budget and Accounting Procedures Act.[11] The BAPA required that the President's budget submittal to Congress be expressed not only in terms of line items of expenditure (inputs) but also in terms of functions and activities (intermediate outputs). While the intent of BAPA was to shift the focus of federal budgets from inputs to outputs, the impact of BAPA appears to have been limited to two innovations. First, data closely akin to average variable cost data was now included in the budget submittal to illustrate the incremental cost (savings) of increasing (or decreasing) certain programs. Second, the presentation of the budget submittal was revised to include "obligations by activities" which described the major programs, projects, and activities associated with budget requests.

PPBS (Planning Programming and Budgeting System): Mandated by President Johnson in 1965, the Planning-Programming-Budgeting System attempted to introduce an explicit decision-making framework to the executive branch's budget formulation process. The PPBS approach consisted of three distinct phases: **Planning** -- the definition and examination of alternative goals and objectives; **Programming** -- the definition and analysis of alternative actions to achieve those goals together with their resource implications; and, **Budgeting** -- the formulation, justification to the Congress, execution and control of the budget. While the planning and budgeting phases of the

[11] See Premchand (1983) and GAO (1997a) for reviews of BAPA.

PPBS system did not significantly differ from the existing federal budgeting process, the programming phase attempted, for the first time, to create an explicit, institutional linkage between the planning and budgeting components of the budget process. By attempting to introduce constrained optimization techniques into the federal budgeting process, the PPBS was seen as a means of encouraging an analytical, intertemporal approach to decision-making that emphasized the systematic evaluation of alternatives through the use of cost-benefit and systems analysis. Instead of the annual focus of previous budgeting systems, the PPBS encouraged multi-year discounting, intertemporal tradeoffs among competing programs, and provided incentives for the complete accounting of all relevant costs, to include the positive and negative externalities associated with budgetary decisions. The PPBS introduced one other significant innovation by attempting to explicitly link program elements (measurable inputs) and program categories (intermediate outputs and activities) to multi-year objectives.[12]

While the PPBS introduced systems analysis and multi-year discounting into the federal budgeting process, the system failed to provide the proper incentives to emphasize the output side of the budget. Part of the failure of the PPBS can also be attributed to the lack of preparation of executive departments and Congress for its implementation (Premchand, 1983). The annual budget cycle also placed significant time pressure on the programming phase of the PPBS and the administrative and reporting requirements of the PPBS increased significantly over time. Today, what remains of the PPBS can be found in the budget formulation process of the United States Department of Defense (DoD) where PPBS is still used to develop the DoD budget that is included in the President's annual budget submittal to Congress.

[12] See Novick (1965, 1973), Shick (1966, 1973), and Premchand (1983), among others.

MBO (Management by Objectives): Following the government-wide discontinuation of PPBS, the Nixon Administration launched Management by Objectives in 1973 in another attempt to explicitly link agencies' objectives to their budget requests.[13] MBO sought to create an institutional environment within which agency managers would be evaluated against negotiated outputs and outcomes. While performance was typically defined as intermediate processes and outputs, some efforts were made to link outcomes to budget requests. The MBO system consisted of three phases: **objective setting** - negotiating outputs or outcomes to be achieved; **implementation** - executing the budget to achieve the desired objectives; and **evaluation** - the use of qualitative and quantitative tools to evaluate results and the use of resources. While the focus of the PPBS was on financial inputs and economic costs, MBO instead focused on the management process and was an attempt to improve managerial efficiency. As with BAPA and PPBS, MBO was discontinued when its initiator, President Nixon, left office. Among the list of failures associated with MBO were data problems in that MBO was apparently too far removed from the agencies to effectively negotiate and evaluate performance (Tossi, Rozzo, and Carroll, 1970; Tossi and Carroll, 1971).

ZBB (Zero-Base Budgeting): Introduced in 1977 by President Carter, the Zero-Base Budgeting system attempted to create an institutional environment in which agencies were required to set priorities based on program results that could be achieved at different spending levels.[14] As with PPBS, the ZBB approach was a move away from the incremental budgeting approach of traditional budgeting (Meyers, 1999). The goal of the ZBB was to more clearly identify programs

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[13] See Tosi, Rizzo, and Carroll (1970), Tosi and Carroll (1971), Morrisey (1976), and Odiorne (1979) for discussions of Management by Objectives budgeting techniques.

[14] See Novick (1965), Premchand (1983), and Meyers (1999).

through an array of decision packages at three different resource levels. By examining programs at three different resource levels, the ZBB sought to develop a clear and precise link between budgetary resources and program results (Lewis, 1952). In developing budget proposals, alternatives were ranked against each other without reference to historical expenditures and with a focus on total rather than marginal expenditures. While the concept of the ZBB was intuitively appealing, the ZBB system was unable to overcome the preoccupation of government agencies with current operations (Shick, 1978). The ZBB was discontinued early in the Reagan Administration.

Why did these reforms fail? Although the consensus in the literature appears to be that the previous attempts at performance-oriented budget process reform largely failed to meet their stated objectives, we believe that these efforts laid the foundation for the current performance-oriented effort currently underway in the United States. Several lessons can be drawn from the efforts. First, the effort to implement performance budgeting requires a significant investment in accounting and information systems and human capital. If, as in the United States, systems have been developed to allocate and track the expenditure of fiscal resources, and not the influence of these expenditures on outputs and outcomes, then these systems will require modification to link inputs (appropriations and obligations) to outcomes and outcomes (acres of forest managed, number of clients served, reduction in specific types of pollution). Second, while the impetus for budget process reform may be a "top-down" initiative, the modified process must be sufficiently flexible to encompass the diverse inputs and outputs of the various federal departments and agencies. These organizations should be granted sufficient autonomy in the budget process to develop their objectives and to allocate resources across competing objectives in reflection of the priorities of the organization, the President, and the stakeholders. Third, the determination and evaluation of performance objectives requires input from the various stakeholders, to include the legislative branch and, where appropriate, the client base. PPBS and ZBB were impeded by the exclusion of the various stakeholders in the performance planning and measurement process. When the budgets developed using these methodologies were presented to Congress, they were often misunderstood and viewed with suspicion as products of the executive branch that were developed without the appropriate level of Congressional input. For budget reform to be successful, Congress should take an active role in the development of the reform process to ensure that its views and concerns are adequately addressed by the impending reforms.

3.2 What can we learn from performance budgeting reforms in other countries?

The United States is not the only developed country to introduce significant budget process reforms in the past decade. Several other OECD countries, to include Austria, Australia, Germany, Great Britain, and New Zealand have undertaken reforms with the objective of moving the focus of the budget process from an annual, line-term perspective to a multi-year, performance based focus. Three general trends emerge from these efforts.[15] First, many of these countries have introduced performance budgeting techniques in an attempt to quantify performance and to explicitly link resource allocation with performance. Second, there has been a tendency to move away from centrally driven budgets to budgets that are created by line departments and ministries. Third, each of these countries moved to highlight, and in some cases, explicitly incorporate, the multi-year budgetary implications of resource allocation decisions.

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[15] Premchand (1999) reviews budget techniques in the United States, Australia, New Zealand, and the United Kingdom. Boex, Martinez-Vazquez, and McNab (2000) examine multi-year budgeting techniques and their application in transitional countries.

What lessons do these reforms hold for the United States? First, performance oriented budget reform cannot be successful without reforms in other supporting budget processes. Examining the budget reforms in Australia, Great Britain, and New Zealand, we note that the reform process has been systemic rather than piecemeal.[16] Performance objectives have been tied to multi-year budget estimates that are consolidated in a centralized budget database. The role of the central finance department or ministry has been transformed from one of generating estimates and resource allocations to one of providing budgetary guidance, consolidation, and evaluation of the estimates of the line departments and ministries. The line departments and ministries, and not the central finance department, have assumed the responsibility of generating their budget estimates. While variations exist among the Commonwealth countries, this approach to budgeting appears to be a marked departure from that currently practiced by the federal government in the United States.

Second, as we noted in the preceding section, budget process reform requires a significant investment in accounting and information systems and personnel. Financial investment must be accompanied by an empowerment of line departments and agencies through enhanced flexibility in personnel and other policies. In Great Britain, for example, budget reform resulted in the creation of new task-oriented agencies. The heads of these agencies, which were hired on a contractual basis, were given control over resources and were held accountable for results. At the same time, heads of traditional agencies were gradually granted the authority to determine the pay scales for their employees. Concurrently, the role of central agencies was gradually transformed from centralized

[16] See Premchand (1990, 1994, 1996) and Meyers (1999) for further information on performance budgeting and budgeting techniques in OECD and other countries.

management to oversight, audit, and, when necessary, intervention (Premchand, 1999). In Australia, the on-going budget reform process has led the Australian Department of Finance and Administration to offer training programs for the support staff of Members of Parliament. These programs were designed not only to address the need for training for budget analysts in the executive branch of government, but also the legislative branch of government. Supporting this effort was the implementation of the Parliamentary Services Suite, which replaced a number of aging information systems and incorporated financial management, entitlements processing, superannuation and human resource management systems (ADOFA, 2000).

Lastly, devolving authority in the budget process appears to enhance accountability and the transparency of the budget process. In Great Britain, line departments are responsible for determining program priorities subject to general guidance provided by the Treasury. Unlike the United States, line departments now have the authority to reprogram funds within their departments to concentrate scarce resources on higher priority programs by reducing or eliminating lower priority programs. In this context, departments are responsible for allocating scarce resources to produce the best possible outcomes, so an incentive exists for departments to allocate resources in response to citizen preferences and to conserve scarce resources to meet program priorities. Departments that achieve cost savings can transfer a portion of the savings to the next fiscal year, a provision that appears to be directly aimed at defeating the “use it or lose it” behavior associated with control oriented budgets. These, and other reforms, appear to address the incentive structure associated with control oriented budgets.

4. The Government Performance and Results Act

Signed by President Clinton in 1993, the Government Performance and Results Act is the latest in a long line of federal initiatives to mandate performance budgeting. Although the GPRA can be viewed as the culmination of a series of government-wide performance budgeting initiatives, it is also the leading initiative among a host of contemporary federal management and financial reforms. Noteworthy among these complementary contemporary reforms are: the Chief Financial Officers (CFO) Act of 1990; the Government Management Reform and Federal Acquisition Streamlining Acts (GMRA and FASA) of 1994; and the Information Technology Management Reform Act (ITMRA) of 1996.[17] The GPRA's ambitious agenda includes three primary objectives: improving congressional decision-making; promoting better internal management of government programs; and increasing accountability to taxpayers.

In order to accomplish this ambitious agenda, the GPRA consists of a four-step plan. The first step is for departments to submit five-year strategic plans containing general goals and objectives for all major functions and operations. The second step is for departments to develop annual performance plans expressing these goals and objectives in measurable form or, alternatively, through the inclusion of descriptive statements of minimally acceptable and successful programs. The third step is for departments to deliver annual performance reports to the President and Congress that measure progress toward performance objectives stated in their performance plans. The final step is to link budgets with performance.

Beginning with the 1999 budget cycle, all federal agencies submitted five-year strategic plans

[17] See GAO (1997a), Jones and McCaffery (1992, 1993, 1997) and Meyers (1999), among others, for an examination of the CFO Act, GMRA, FASA, and ITMRA.

to the Office of Management and Budget (OMB). In these five-year plans, the agencies attempted to identify their objectives, how performance would be measured, and how the agencies would achieve their objectives over the course of the five-year plan. Concurrent with the submittal of the five-year plans, the agencies also submitted their annual performance plans to Congress. Beginning with the year 2000 budget cycle, agencies delivered their first annual performance reports that documented how well they met the prior year's performance plans. Meanwhile, OMB has developed an overall federal government performance plan from individual agencies' performance plans. These overall performance plans are to be routinely submitted to Congress along with the President's budget. The ultimate objective is to increase transparency by tying annual performance plans to agency budget requests.

As discussed in the previous section, past budget initiatives tended to impose unique structures upon agencies in an attempt to capture performance information that proved difficult and costly to transform into the traditional congressional budget presentation framework. Drawing upon this experience, Congress sought with GPRA to reform the budget process and develop performance budgeting within the existing budgeting structure and cycle. Departments are required under GPRA to develop performance metrics and evaluate their performance relative to those metrics using the basic structures which form the basis for the Congressional budget presentations: program activities. Departments are also required to display expenditures required to achieve performance objectives and to crosswalk performance objectives and the specific budget accounts funding the objectives (OMB, 1998a, 1998b). The hope is that the previous impediments to budget process reform can be overcome by working within the existing budget structure. Of course, the danger is that the GPRA will be subsumed by the existing structure, thwarting the objective of linking expenditures to outcomes.

Unlike many of the previous performance oriented budget process reforms, GPRA has been implemented on an incremental basis. We believe that this alone is a significant improvement over the previous performance budgeting oriented attempts at reform. The pilot program produced valuable information on the obstacles to achieving the stated objectives of the GPRA. An important stumbling block uncovered by the Government Accounting Office in the test phase of GPRA was the problem many agencies faced in bringing stakeholders together to achieve consensus on a unique set of agency goals (GAO, 1997a, 1997b). Before developing performance metrics, agencies must first overcome the problem of goal congruence. Only when the agency, stakeholders, and clients have achieved consensus on a set of objectives can the agency develop metrics to gauge its performance over time relative to these objectives.

A significant risk arising from the concurrent implementation of these financial (CFO and GRMA) and managerial (FASA and ITMRA) reforms is the potential increase in administrative and transaction costs. In evaluating the costs associated with these initiatives, it is prudent to examine the opportunity costs involved in complying with these initiatives. Anecdotal evidence suggests that the current burden of satisfying legislative requirements already absorbs valuable resources that, with the proper incentives, might otherwise be invested in improving the quality or quantity of public goods and services.[18] The environment in which GPRA is being implemented may also be an impediment to reform. Over two-thirds of federal workers in financial management positions were

[18] In 1999, for example, 24 agencies produced audited financial statements, of which 14 received clean opinions. However, this success was, in some cases, attributed to intensive staff efforts to gather and reconcile information from systems that are not yet integrated (JFIMP, 2001).

aged 45 or older in 1999 and the overall workforce is characterized as having significant skill imbalances relative to work requirements. [19]

5. Incentives, Performance, and Budgets

While the federal budgeting environment has changed significantly from the time of the Hoover Commission, the tying of monetary inputs to performance outcomes has remained an elusive objective. If the GPRA is to create an explicit linkage between budget appropriations (and obligations) and the outcomes generated by public expenditure, it must create an institutional environment that rewards efficiency, transparency, and the prompt, concise, and accurate reporting of costs, outputs, and outcomes. If the GPRA fails to create such an environment, departments are likely to respond to the current incentive structure by "gaming" their performance reports to present their activities in terms designed to maximize their budgets.

The current challenge facing Congress and other interested parties is to create a system of incentives to solicit the timely and accurate submittal of cost, output, and outcome data which can then be used in the budget process. Departments, on the other hand, may be focused on objectives other than cost minimization or output maximization. They may instead have the objective of obtaining budgets that provide as much residual funding as possible in excess of the true cost of providing a given level of output.[20] Providing Congress with accurate information on costs and

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[19] The average age of the Federal worker was 45.9 years in 1999 and the share of Federal workers eligible for retirement has doubled over the last decade (GAO, 2001).

[20] Migue and Belanger (1974) refer to an agency's budget surplus as discretionary spending that may be used to purchase items not directly related to the production of an agency's output (new furniture, travel to conferences, and so on). See Wyckoff's (1990) behavioral analysis of budget-surplus maximizing agencies.

outputs may pose a threat to this objective. If the department provides an output for which it is the sole supplier, it is likely that only the department will know the true cost of the output in question. Congress, in this case, may be dependent on the department for the provision of cost data. In an environment characterized by asymmetric information and monopolistic supply, the department may be able to secure a budget that is greater than that desired by Congress (Niskanen, 1971; Miller, 1977; Moene, 1986; Mueller, 1989; Wintrobe, 1997; Claar, 1998).[21]

The task of creating an environment in which resources can be linked to outcomes is daunting. Congress, in effect, would need to contract with the various agencies and departments on cost and performance terms. In many cases, Congress (the principal) could not contract with each department (the agent) on its true objective. Congress could not, for example, enter into a contract with the Department of Defense for a non-quantifiable amount of an outcome called "national security." The principal, when the outcome is not quantifiable, would have to use output or quantifiable performance measures (number of active-duty soldiers, aircraft carriers, or aircraft-readiness rates) as a means of telling the agent what must be done. However, since performance measures may not always provide the agent accurate incentives, the agent may engage in activities that the principal, if they had the agent's information, would consider suboptimal (Baker, 1992).

In order to solicit accurate information from departments in support of the performance-budgeting process, Congress should consider altering the incentives that influence the behavior of departments in the budget cycle. The incentives-contracts literature is replete with examples of

[21] Niskanen (1971) and Miller (1977) impose an additional constraint where the department's sponsor presents a take-it-or-leave-it budget proposal. Mueller (1989) and Claar (1998) are among those that have relaxed this assumption. Imposing an additional constraint on the type of the budget proposal does not, given the other assumptions, appear to affect the ability of the department to secure a budget greater than that desired by its sponsor.

agents modifying their behavior in response to new incentive schemes.[22] As noted previously, the current budgeting system has created a perverse incentive that rewards agents (departments) for budget-maximizing behavior (through static or increased funding levels in the next fiscal year) and penalizes those agents who engage in cost-saving behaviors. This type of behavior could be attenuated by allowing agents to keep a portion of non-expended resources for discretionary activities. Of course, the principal (Congress) would also have to contract with the various agents on output and performance terms, else agents would then have the incentive to conserve resources by constricting or lowering the quality of output.

Contracting on cost and performance data would also require that Congress and the executive branch move away from the current, adversarial budget process. Congress can, in the current system, contract with each department on the quantity of output and the price per unit of output. In the presence of asymmetric information on costs, monopolistic supply, and the principal contracting on output and unit cost, however, the welfare-maximizing unit price will be above the agent's true marginal cost per unit of output (Claar, 1998). The contracting process would also have to consider uncertainty in the demand for and production of public goods. The principal, in order to provide the agent with incentives to accurately report their cost information, may have to pay a subsidy to elicit accurate information. It is likely, given the literature on incentives and public sector performance, that Congress would have to offer pricing terms in excess of the true marginal cost of each department to effectively solicit cost and performance information.

Even if Congress were to offer pricing terms in excess of the true marginal cost, the

[22] See Holmstrom and Milgrom (1991) for an analysis of multitask principal agent incentives and contracts. Wintrobe (1997) reviews the literature on bargaining games between government agencies and their sponsors while Prendergast (1999) reviews the literature on the provision of incentives in firms.

development of performance metrics that identify the influence of public expenditures on outcomes would not necessarily guarantee the adoption of these metrics by department managers. They may, in fact, use metrics (unit costs, caseloads, and other cost-output information) with which they are most comfortable. They are likely to take action to improve their performance in terms of these familiar metrics, even if such actions may be to the determinant to those outcomes that are of interest to their stakeholders (Osborne and Gaebler, 1992). Excessive quantities of goods and services whose characteristics are quantifiable and easily monitored may be produced as agents exploit principals who lack the knowledge on the true demand for public goods and services and the costs of producing them. These behaviors favor programs for which metrics are readily available over those whose outcomes are more difficult to quantify. Moreover, in the presence of asymmetric information, departments may also have the incentive to produce highly differentiated goods and services with characteristics that do not lend themselves to being measured or monitored (Niskanen, 1971).

In attempts to address some of these problems, Great Britain, Australia, and New Zealand now allow departments to retain a portion of unexpended resources that arise due to cost-savings or process improvements. Metrics can be used to identify cost-savings improvements that hold the quantity (or quality) or output constant in the case where outcomes are not readily quantifiable. Where outcomes can be quantified, departments can be rewarded by Congress for the development and use of new metrics that improve Congressional and Administration budgeting processes. By rewarding behavior that results in cost-savings or process improvements, some of the perverse incentives generated by the current system can be addressed. [23]

[23] However, three problems remain including monitoring that: a) cost savings awarded are not obtained at the expense of

Does the GPRA create an environment conducive to departments accurately reporting cost and performance information to Congress? In its current form, the GPRA merely requires agencies to report cost and performance information to Congress. Congress does not appear to contract with agencies on cost and performance terms. Anecdotal evidence suggests that agencies remained focused on obligations and not performance (Anthony, 2000). It does not appear that Congress is auditing the performance plans and reports for accuracy and is relying on the agencies to accurately state their cost and performance information. As we have noted above, the incentive exists for agents to maximize the budget surpluses by overstating the true marginal cost of providing public output. Departments also appear to be gaming the system by submitting performance plans and reports that number in the hundreds, if not thousands, of pages.[24] As the amount of data submitted to Congress increases, we believe that the ability of Congress to effectively process this information, given limited resources and time, decreases. If true, this would mean that the asymmetry of information is becoming more pronounced over time.

We believe that the GPRA fails to address the existing incentives in the federal budgeting process. Without a modification of these incentives, the final step of linking performance to budget decisions is unlikely to occur. While the GPRA has established a framework for reporting cost and performance information, it lacks the incentives by which Congress can elicit accurate cost and performance data from departments. Until these incentives are addressed, we believe that the impact of GPRA will be limited.

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quality; b) awards to individuals do not reduce the effectiveness of team production; and c) rewards are allocated based on internal process (product) improvements - and not on the basis of external (or exogenous) events (Melese, 1997).

[24] See http://www.firstgov.gov for copies of the annual performance plans and reports. The General Accounting Office examines the submitted plans and reports and copies of these examinations may be found on the GAO's website at http://www.gao.gov.

6. The Problem of Goal Congruence

While private sector performance can typically be captured in a single measure such as economic profit or return to investment, quantifying the performance of public sector organizations is a more difficult task. Public sector organizations differ from private organizations in two fundamental respects. First, public sector organizations lack a residual claimant. Second, public sector organizations often lack a set of defined and quantifiable objectives (Courty and Marschke, 1997). Unlike the private sector where performance is often measured in terms of profit or return to investment, public sector organizations may require a set of metrics against which performance may be measured (Smith, 1996). Developing performance metrics for public sector organizations is a necessary step in the process of linking inputs to outcomes. Developing metrics, however, is only part of the problem. The interested parties must first agree on what is to be measured before metrics can be developed to measure performance.

Public sector organizations, unlike their counterparts in the private sector, may have to answer to numerous, and often adversarial, stakeholders. Each of these stakeholders (principals) may have a different set of preferences on the objectives and activities of each organization in which it has an interest. The existence of multiple, competing stakeholders creates obstacles to achieving goal congruence. That is, with multiple principals, it is difficult to achieve agreement on an agent's goals and objectives. Without goal congruence, developing performance metrics that can be used to evaluate an agent's performance is difficult (Greiner, 1996).

While the United States adopted multi-principal politics as a founding principle of its system of governance, multi-principal politics also comes at a cost in terms of economic efficiency. In a system where multiple principals compete for the dominance of their set of preferences, resources are allocated to activities that may not be economically efficient. Inefficiencies may arise if the objective of a controlling group of principals is to transfer public resources to its supporters.[25] Rent-seeking behavior by principals can also lead to negative-sum games (Niskanen, 1971, 1974; Dunleavy, 1991). When one set of principals seeks rents from the public sector, this action can motivate other principals to take action to protect their current benefits. The net outcome may be that more resources are used in defensive and unproductive activities (promoting or defending a specific program or activity) than the actual value of the program or activity in question. Achieving goal congruence is this environment is a difficult task in that it requires an answer to whose preferences will be considered in the setting of objectives and the development of performance metrics.

In order to measure performance, agents must first develop sets of metrics against which the outcomes generated by the agents will be judged. By developing performance metrics, agents are implicitly ranking the preferences of one group of principals over another (Smith, 1996). Which groups' preferences prevail ultimately depends upon the relative political power of the competing principals. If it is still possible to fix the structure of the political game, three potential solutions exist to the multi-principal, multi-dimensional bargaining game. First, one may restrict the principals' incentive schemes so that each principal is allowed to observe and reward only the dimensions of output that are of direct concern to the principal. Second, it may be possible to group

[25] See Shleifer and Vishny (1993), Mauro (1995, 1998), Tanzi (1998), and Tanzi and Schuknecht (2000), among others, for a further discussion of this issue.

principals whose interests are closely aligned. This creates homogenous groupings where the principals can collude to produce the desired result. Finally, more agents can be created by reassigning activities and programs from the current set of agents, thereby reducing the externalities among the principals affected by the agents' actions (Dixit, 1997).

Even if we were able to create homogenous groupings of principals or split departments into small bureaus with highly specialized programs and activities, goal congruence may still be difficult to achieve. Achieving the economic efficiency improvements that are the motivation for performance budgeting will invariably require the reallocation of inputs and outcomes, which would favor the preferences of one or more principals over others. Reaching consensus on what objectives should be modified and how progress should be measured is likely to occur in an environment characterized by the presence of concentrated costs and diffuse benefits (Stiglitz, 1998). Although the majority or all the principals may initially support the proposed efficiency improvements, the emergence of concentrated costs, which are borne by a sub-set of principals, may lead to the emergence of an active opposition to the proposed improvements. The supporters of the proposed improvements may suffer from free riding and thus may encounter difficulty in defending their preferences against the objections of those who must bear the costs of the proposed reform (Olson, 1971).

With these problems in mind, we argue that contemporaneous decisions on objectives and performance metrics will shape coalitions in the future. Consider that every four years administrations can come and go, and every two years control of the House and Senate can shift from one party to another. Although those in government at one date cannot commit future governments to abide by their goals and objectives, they can affect the transaction costs of reversing their initiatives. If people are more sensitive to losses than to gains, then losers will invest more in blocking (or undermining) than winners do to achieve gains (Kahneman & Tversky, 1991). Thus, it is conceivable that inefficiency could actually be built into a government program as part of a legislative compromise over the goals of the program.

Arriving at a single set of objectives and metrics may ultimately result from compromise, conflict, and confusion among the competing principals. Nonetheless, by attempting to define goals, and measuring and rewarding outcomes relative to those goals through the budgeting process, performance budgeting systems seek to discipline public-sector agencies much as markets discipline firms. This approach underlies the contemporary resurrection of federal performance budgeting. Unfortunately, these attempts often neglect the power of the profit motive, the influence of competition, and the incentives needed to link performance to the allocation of scarce resources.

Does the GPRA enhance goal congruence? As noted above, the development and submittal to Congress of performance plans requires a degree of congruence within each organization. Whether congruence has been achieved between the organizations and Congress is an open question. The recent change in Administrations has led to a call by Congress for the editing and re-submittal of performance plans so they are consistent with the new Administration's priorities (Budget and Program, 2001). We believe that if congruence had been achieved that the rewriting of performance plans would have not been considered. What appears to be lacking with the GPRA, as we have noted in previous sections, is a formal mechanism by which departments and Congress establish goals, objectives, and metrics that are the foundation of a performance-oriented budgeting process.

Summary and Conclusions

As we have discussed in this paper, the GPRA is a laudable effort to transform the focus of the federal budgeting process from inputs and outputs to outcomes. Moving away from the current focus on obligations will be a difficult task. Investments in human capital and information systems will be necessary. Procedures will need to be modified and institutions will have to reform. For performance budgeting to succeed, all these steps must occur.

We do not, however, believe that GPRA, in its current form, can succeed in transforming the federal budgeting process. The GPRA lacks a mechanism by which the incentive structure of the current budget process can be modified to reward behavior that results in cost-savings and efficiency improvements. Departments, who may be penalized for accurately reporting about performance, are responsible for reporting their cost, output, and outcome information to Congress. Congress, and departments for that matter, may lack adequate resources to link inputs to outcomes or to audit performance reports. All this leads to an environment where departments can report on those outputs and outcomes that are easily managed and ignore those outcomes that are hard to measure, let alone monitor.

We have, throughout this paper, developed several suggestions that should be adopted for GPRA to at least have a chance of succeeding. First, Congress must remove the use-it-or-lose-it incentive by allowing departments to transfer savings between fiscal years. This will require, at a minimum, a more comprehensive multi-year budgeting approach than is currently present at the federal level. Second, Congress should consider independently auditing departmental plans and reports in a manner consistent with financial audits in the private sector. We believe that Congress should consider having private sector agencies audit the plans and performance reports of federal agencies. Third, Congress must allocate sufficient resources to build the foundation of performance budgeting by investment in accounting and information systems and adequate training of personnel.

If these steps do not occur, the future of GPRA is not bright. As time passes, departments will learn of the gaming activities of other departments and follow suit. Congress, already deluged with performance plans and reports in the thousands of pages, will see the amount of data submitted grow significantly. At the same time, the information contained in these reports will become less accurate as departments strive to hide their true demand and cost information. In the end, GPRA, like its predecessors, is likely to be discontinued unless the problems we noted in this paper are addressed. The stakeholders in the budget process should recognize that GPRA has provided lessons upon which the next steps to performance budgeting can occur. The question is whether the stakeholders can achieve the necessary consensus to implement the reforms necessary to address these flaws. This question, among others, also awaits resolution.

REFERENCES

Anthony. R. 2000. The Fatal Defect in the Federal Accounting System. Public Budgeting and Finance 20 (3), 1-10.

Australian Department of Finance and Administration. 2000. Annual Report. Canberra: Australia Department of Finance and Administration (http://www.dofa.gov.au/publications).

Baker, G. 1992. Incentive Contracts and Performance Measurement. Journal of Political Economy 100 (3), 598-614.

Baumol, W., J. Panzar, and R. Willig. (Eds). 1982. Contestable Markets and the Theory of Industry Structure. New York: Harcourt Brace Jovanovich.

Boex, J.; J. Martinez-Vazquez, and R. McNab. 2000. Multi-year Budgeting: A Review of International Practices and Lessons for Developing and Transitional Economies. Public Budgeting and Finance 20 (2), 91-112.

Brown, R., M. Myring, and C. Gard. 1999. Activity-Based Costing in Government: Possibilities and Pitfalls. Public Budgeting and Finance 19 (2), 3-21.

Budget and Program. 2001. XXVII (13), 2-3.

Claar, V. 1998. An Incentive-Compatibility Approach to the Problem of Monitoring a Bureau. Public Finance Review 26 (6), 599-610.

Courty, P. and G. Marschke. 1997. Measuring Government Performance: Lessons from a Federal Job-Training Program. American Economic Review 87 (2), 383-88.

Dixit, A. 1997. Power of Incentives in Private versus Public Organizations. American Economic Review 87 (2), 378-82.

Dunleavy, P. 1991. Democracy, Bureaucracy, and Public Choice. Hemel Hempstead: Harvester Wheatsheaf.

Gianakis, G. 1996. Integrating Performance Measurement and Budgeting. In Halachmi, A. and G. Bouckaert (Eds.) Organizational Performance and Measurement in the Public Sector. London: Quorum Books.

General Accounting Office. 2001. Major Management Challenges and Risks: Departments of Defense, State, and Veterans Affairs (GAO-01-492T). Washington, DC: U.S. Government Printing Office.

General Accounting Office. 1997a. Performance Budgeting. Part Initiatives Offer Insights for GPRA Implementation (GAO/AIMD-97-46). Washington, DC: U.S. Government Printing Office.

General Accounting Office. 1997b. Managing for Results: Analytic Challenges in Measuring Performance (GAO/HEHS/GGD-97-138). Washington, DC: U.S. Government Printing Office.

General Accounting Office. 1997c. Executive Guide: Measuring Performance and Demonstrating Results in Information Technology Investments (GAO/AIMD-97-163). Washington, DC: U.S. Government Printing Office.

Government Performance and Results Act of 1993. Public Law 103-62. U.S.C.……

Greiner, J. 1996. Positioning Performance Measurement for the Twenty-First Centry. In Halachmi, A. and G. Bouckaert. (Eds.). 1996. Organizational Performance and Measurement in the Public Sector. London: Quorum Books.

Holmstrom, B. and P. Milgrom. 1991. Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design. Journal of Law, Economics and Organization 7 (0), 24-52.

Joint Financial Management Improvement Program. 2001. JFMIP News 13 (1), 11.

Jones, L.R. and J. McCaffery. 1992. Federal Financial Management Reform and the Chief Financial Officers Act. Public Budgeting and Finance 12 (4), 75-86.

Jones, L.R. and J. McCaffery. 1993. Implementation of the Federal Chief Financial Officers Act. Public Budgeting and Finance 13 (1), 68-76.

Jones, L.R. and J. McCaffery. 1997. Implementing the Chief Financial Officers Act and the Government Performance and Results Act in the Federal Government. Public Budgeting and Finance 17 (1), 35-55.

Jordan, M. and M. Hackbart. 1999. Performance Budgeting and Performance Funding in the States: A Status Assessment. Public Budgeting and Finance 19 (1), 68-88.

Kahneman, D. and A. Tversky. 1991. Loss Aversion in Riskless Choice: A Reference-Dependent Model. Quarterly Journal of Economics 106 (4), 1039-61.

Lewis, V. 1952. Toward a Theory of Budgeting. Public Administration Review.

Mascarenhas, R.C. 1996. Searching for Efficiency in the Public Sector: Interim Evaluation of

Performance Budgeting in New Zealand. Public Budgeting and Finance 16 (3), 13-27.

Mauro, P. 1998. Corruption: Causes, Consequences, and Agenda for Further Research. Finance and Development 35 (1), 11-14.

Mauro, P. 1995. Corruption and Growth. Quarterly Journal of Economics 110 (3), 681-712.

McCaffery, J. 1999. Features of the Budgetary Process. In R. Meyers (Ed.). Handbook of Government Budgeting. San Francisco : Jossey-Bass Publishers, 3-29.

Melese, F. 1997. Gain-Sharing, Success-Sharing, and Cost-Based Transfer Pricing: A New Budgeting Approach for DOD. Military Operations Research.

Meyers, R. 1999. Handbook of Government Budgeting. San Francisco : Jossey-Bass Publishers.

Migue, J. and G. Belanger. 1974. Toward a general theory of managerial discretion. Public Choice 17, 27-47.

Miller, G. 1977. Bureaucratic Compliance as a Game on the Unit Square. Public Choice 29, 37-51.

Moene, K. 1986. Types of Bureaucratic Interaction. Journal of Public Economics 29, 333-345.

Morrisey, G. 1976. Management by Objectives and Results in the Public Sector. Reading, Massachusetts: Addison-Wesley Publishing.

Mueller, D. 1989. Public Choice II. Cambridge: Cambridge University Press.

Mullins, D. and C.K. Zorn. 1999. Is Activity-Based Costing Up to the Challenge When It Comes to Privatization of Local Government Services? Public Budgeting and Finance 19 (2), 37-58.

Niskanen, W. 1971. Bureaucracy and Representative Government, Chicago: Aldine-Atherton.

Niskanen, W. 1972. Toward More Efficient Fiscal Institutions. National Tax Journal 25 (3), 343-47.

Niskanen, W. 1975. Bureaucrats and Politicians. Journal of Law and Economics 18 (3), 617-43

Niskanen, W. 1994. Bureaucracy and Public Economics. Fairfax: Edward Elger.

Novick, D. (Ed.) 1965. Program Budgeting: Program Analysis and the Federal Budget. Cambridge: Harvard University Press.

Novick, D. 1973. Current Practice in Program Budgeting. New York: Russak.

Office of Management and Budget. 1998a. Preparation and Submission of Strategic Plans and Annual Performance Plans (Circular No. A-11, Part 1). Washington, DC: U.S. Government Printing Office.

Office of Management and Budget. 1998b. Preparation and Submission of Strategic Plans and Annual Performance Plans (Circular No. A-11, Part 2). Washington, DC: U.S. Government Printing Office.

Office of Management and Budget. 1996. Performance of Commerical Activites (Circular A-76). Washington, DC: U.S. Government Printing Office.

Odiorne, G. 1979. Management by Objectives: A System of Managerial Leadership. New York: Pitman Publishing Corporation.

Olson, M. 1971. The Logic of Collective Action. Cambridge, Harvard University Press.

Osborne, D. and T. Gaebler. 1992. Reinventing Government. Reading, Massachusetts: Addison Wesley.

Pitsvada, B. 1983. Flexibility in Federal Budget Execution. Public Budgeting and Finance 3 (2), 83-101.

Pitsvada, B. 1988. The Executive Budget--An Idea Whose Time Has Passed. Public Budgeting and Finance 8 (1), 85-94.

Premchand, A. 1999. Budgetary Management in the United States and in Australia, New Zealand, and the United Kingdom. In R. Meyers (Ed.). Handbook of Government Budgeting. San Francisco : Jossey-Bass Publishers, 82-116.

Premchand, A. 1994. Issues and New Directions in Public Expenditure Management. International Monetary Fund Working Paper (WP/96/123). Washington, DC: International Monetary Fund.

Premchand, A. 1994. Changing Patterns in Public Expenditure Management: An Overview. International Monetary Fund Working Paper (WP/94/28). Washington, DC: International Monetary Fund.

Premchand, A. (Ed.). 1990. Government financial management: Issues and country studies. Washington, D.C.: International Monetary Fund

Premchand, A. 1983. Government Budgeting and Expenditure Controls. Washington, DC: International Monetary Fund.

Prendergast, C. 2000. What Trade-Off of Risk and Incentives? American Economic Review 90 (2), 421-25

Prendergast, C. 1999. The Provision of Incentives in Firms. Journal of Economic Literature 37 (1), 7-63

Schick, A. 1996. The Road to PPB: The Stages of Budget Reform. Public Administration Review 26 (4), 243-58.

Schick, A. 1978. The Road from ZBB. Public Administration Review.

Schick, A. 1973. A Death in the Bureaucracy: The Demise of Federal PBB. Public Administration Review.

Schliefer, A. and R. Vishny. 1993. Corruption. Quarterly Journal of Economics 108 (3), 599-617.

Smith, P. (Ed.). 1996. Measuring Outcome in the Public Sector. New York: Taylor and Francis Publishers.

Stiglitz, J. 1998. Distinguished Lecture on Economics in Government: The Private Uses of Public Interests: Incentives and Institutions. Journal of Economics Perspectives 12 (2), 3-22.

Tanzi, V. 1998. Corruption around the World: Causes, Consequences, Scope, and Cures. International Monetary Fund Staff Papers 45 (4), 559-94.

Tanzi, V. and L. Schuknecht. 2000. Public spending in the twentieth century: A global perspective. Cambridge: Cambridge University Press.

Tosi, H., J. Rizzo, and S. Carroll. 1970. Setting Goals in Management by Objectives. California Management Review 12 (4), 70-78.

Tosi, H. and S. Carroll. 1971. The Relationship of Characteristics of the Review Process to the Success of the 'Management by Objectives' Approach. Journal of Business 44 (3), 299-305.

Wildavsky, A. 1974. The Politics of the Budgetary Process. Boston: Little, Brown.

Wildavsky, A. 1992. The New Politics of the Budgetary Process. New York: HarperCollins Publishers.

Williams, C. and W. Melhuish. 1999. Is ABCM Destined for Success or Failure in the Federal Government? Public Budgeting and Finance 19 (2), 22-36.

Williamson, O. 1985. The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting. New York, Free Press.

Willoughby, K. and J. Melkers. 1998. The State of the States: Performance-Based Budgeting in 47 out of 50. Public Administration Review 58 (1), 66-73.

Willoughby, K. and J. Melkers. 2000. Implementing PBB: Conflicting Views of Success. Public Budgeting and Finance 20 (1), 105-20.

Wintrobe, R. 1997. Modern Bureaucracy Theory. In Mueller, D. (Ed.) Perspectives in Public Choice: A Handbook. Cambridge: Cambridge University Press. 429-454.

Wyckoff, P. 1990. The Simple Analytics of Slack-Maximizing Bureaucracy. Public Choice 67, 35-47.